

### **REMARKS/ARGUMENT**

Claim 18-23 stand allowed. Applicants appreciate the indication from the Examiner that Claims 2-5 and 12-15 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims but believe that Claims 2-5 and 12-15 are allowable in their present form in light of the below arguments.

1) Claim 11 stands rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's admitted prior art. Applicant respectfully traverses this rejection, as set forth below.

In order that the rejection of Claim 11 be sustainable, it is fundamental that "each and every element as set forth in the claim be found, either expressly or inherently described, in a single prior art reference." Verdegall Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See also, Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989), where the court states, "The identical invention must be shown in as complete detail as is contained in the ... claim".

Furthermore, "all words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Independent Claim 11 requires and positively recites, a direct conversion receiver, comprising: "a variable gain amplifier operative to amplify an input signal derived from a radio frequency (RF) signal, the gain of the amplifier being adjustable based on a gain control signal from an associated digital system", "a filter operative to filter an amplified signal of the amplifier and provide a filtered output signal" and "a speed-up control system that **generates a speed-up control signal in response to changes in the gain**

**control signal** from the associated digital system and, the speed-up control system providing the speed-up control signal to the filter to adjust filter characteristics of the filter”.

In contrast, there is nothing in the prior art mentioned by Applicants that teaches that its speed-up control system generates a speed-up control signal “in response to changes in the gain control signal”. Indeed, Applicants specifically state in their specification concerning the prior art: “Because the gain control is determined in the DSP 12, the DSP can ANTICIPATE ITS APPLICATION and provide suitable control information to the analog filters to implement desired speed-mode” (specification, page 3, lines 8-10). As such, the discussed prior art generates a speed-up control signal and, by anticipating application of the gain control signal, implementing the desired speed-up signal. As such, the prior art fails to teach or suggest “**generates a speed-up control signal in response to changes in the gain control signal** from the associated digital system”, as required by Claim 11. Accordingly, the 35 U.S.C. 102(b) rejection is overcome.

2) Claims 1, 6, 7, 8, 9, 10 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant’s admitted prior art in view of Eastmond (US 4,811,423). Applicants respectfully traverse this rejection as follows:

In proceedings before the Patent and Trademark Office, “the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art”. In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (citing In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). “The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references”, In re Fritch, 23 USPQ2d 1780, 1783

(Fed. Cir. 1992)(citing In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988)(citing In re Lulu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1988)).

Independent Claim 1, requires and positively recites, an analog speed-up and gain control system, comprising: “a **speed-up circuit** that receives a gain control input signal from associated digital circuitry **and generates a speed-up control signal in response to changes in the gain control input signal**” and “delay circuitry that receives the gain control input signal and outputs a delayed gain control signal according to the gain control input signal”.

In contrast, the prior art of Figure 1 clearly shows that that it is DSP 12 that generates the speed-up control signal (14) (in addition to generating gain control signal (2)) – NOT by the speed-up circuit, as required by Claim 1 and illustrated in Figure 3 and discussed on page 6, lines 7-8 & 19-23). As such, the prior art fails to teach or suggest, “a **speed-up circuit** that receives a gain control input signal from associated digital circuitry **and generates a speed-up control signal in response to changes in the gain control input signal**”, as required by Claim 1.

Even if, arguendo, the Eastmond reference discloses a delay circuit, as suggested by the Examiner, Eastmond fails to teach or suggest the above-identified limitations that are not taught or suggested by the prior art shown in Figure 1. Moreover, even if the Examiner were to provide evidence that Eastmond were to teach the above-identified limitations that are not found in the prior art, the Examiner has provided no evidence from the prior art that would have led one having ordinary skill in the art to add a delayed gain control circuit to the device of Figure 1 in the prior art. The Examiner justifies the combination by stating that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Eastmond into the system of Applicant’s admitted prior art **in order to control the gains of the amplifiers**” (Office Action, page 3, lines 22-25). But Applicants can find no teaching in the admitted prior

art that teaches or suggests that controlling the gain of its amplifiers is a problem that needs to be addressed. Similarly, the Examiner points to no evidence from the prior art that suggests that controlling the gain of amplifiers is a problem in similar devices. Without such teaching from the prior art, the Examiner's determination is nothing more than impermissible hindsight reconstruction. Accordingly, the 35 U.S.C. 103 rejection is overcome.

Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. **The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.** In re Gordon, 733 F.2d at 902, 221 USPQ at 1127. Moreover, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed.Cir.1991). See also Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed.Cir.1985).

Claims 6, 7, 8, 9 and 10 stand allowable as depending (directly or indirectly) from allowable Claim 1 and including further limitations not taught or suggested by the references of record.

Claim 6 further defines the system of claim 1 in combination with a filter network, the filter network comprising at least one variable gain amplifier operative to amplify an input signal according to a gain selected based on the delayed gain control signal. In addition to the reasons previously set forth in support of the allowance of Claim 1, the admitted prior art of Figure 1 and the Eastmond reference alone, or in combination, fail to teach or suggest this additional limitation in combination with the previously discussed limitations of Claim 1.

Claim 7 further defines the combination of claim 6, the filter network further comprising at least one filter operatively coupled to receive the amplified signal from the amplifier, the associated filter having a filtering characteristic that varies based on the speed-up control signal. In addition to the reasons previously set forth in support of the allowance of Claim 1, the admitted prior art of Figure 1 and the Eastmond reference alone, or in combination, fail to teach or suggest this additional limitation in combination with the previously discussed limitations of Claim 6.

Claim 8 further defines the combination of claim 7, the filter comprising a high-pass filter. In addition to the reasons previously set forth in support of the allowance of Claim 1, the admitted prior art of Figure 1 and the Eastmond reference alone, or in combination, fail to teach or suggest this additional limitation in combination with the previously discussed limitations of Claim 7.

Claim 9 further defines the combination of claim 8, the filtering characteristic comprising a corner frequency of the high-pass filter. In addition to the reasons previously set forth in support of the allowance of Claim 1, the admitted prior art of Figure 1 and the Eastmond reference alone, or in combination, fail to teach or suggest this additional limitation in combination with the previously discussed limitations of Claim 8.

Claim 10 further defines the combination of claim 6 implemented as an analog section of a direct conversion receiver. In addition to the reasons previously set forth in support of the allowance of Claim 1, the admitted prior art of Figure 1 and the Eastmond reference alone, or in combination, fail to teach or suggest this additional limitation in combination with the previously discussed limitations of Claim 6.

3) Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Eastmond (US 4,811,423) and further in view of Van Acquoij (US5,909,243). Applicants respectfully traverse this rejection as follows:

In proceedings before the Patent and Trademark Office, "the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art". In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (citing In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). "The Examiner can satisfy this burden **only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references**", In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992)(citing In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988)(citing In re Lahu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1988)).

Independent Claim 11 requires and positively recites, a direct conversion receiver, comprising: "a variable gain amplifier operative to amplify an input signal derived from a radio frequency (RF) signal, the gain of the amplifier being adjustable based on a gain control signal from an associated digital system", "a filter operative to filter an amplified signal of the amplifier and provide a filtered output signal" and "a speed-up control system that **generates a speed-up control signal in response to changes in the gain control signal** from the associated digital system and, the speed-up control system providing the speed-up control signal to the filter to adjust filter characteristics of the filter".

In contrast, there is nothing in the prior art mentioned by Applicants that teaches that its speed-up control system generates a speed-up control signal "in response to changes in the gain control signal". Indeed, Applicants specifically state in their specification concerning the prior art: "Because the gain control is determined in the DSP 12, the DSP can ANTICIPATE ITS APPLICATION and provide suitable control information to the analog filters to implement desired speed-mode" (specification, page

3, lines 8-10). As such, the discussed prior art generates a speed-up control signal and, by anticipating application of the gain control signal, implementing the desired speed-up signal. As such, the prior art fails to teach or suggest “**generates a speed-up control signal in response to changes in the gain control signal** from the associated digital system”, as required by Claim 11.

Moreover, even if, arguendo, the Eastmond reference discloses a delay circuit, as suggested by the Examiner, Eastmond fails to teach or suggest the above-identified limitations that are not taught or suggested by the prior art shown in Figure 1. Moreover, even if the Examiner were to provide evidence that Eastmond were to teach the above-identified limitations that are not found in the prior art, the Examiner has provided no evidence from the prior art that would have led one having ordinary skill in the art to add a delayed gain control circuit to the device of Figure 1 in the prior art. The Examiner justifies the combination by stating that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Eastmond into the system of Applicant’s admitted prior art **in order to control the gains of the amplifiers**” (Office Action, page 3, lines 22-25). But Applicants can find no teaching in the admitted prior art that teaches or suggests that controlling the gain of its amplifiers is a problem that needs to be addressed. Similarly, the Examiner points to no evidence from the prior art that suggests that controlling the gain of amplifies is a problem in similar devices.

Claim 17 further defines the system of claim 16, the delay system comprising a low pass filter. Even if, arguendo, Van Acquoij teaches that a delay circuit is a low pass filter, Van Acquoij does not teach or suggest the previously discussed shortcomings of the admitted prior art and the Eastmond reference. Without such teaching from the prior art, the Examiner’s determination is nothing more than impermissible hindsight reconstruction. Accordingly, the 35 U.S.C. 103(a) rejection is overcome.

Claims 18-23 stand allowed. Claims 1-17 stand allowable over the references of record. Applicants respectfully request allowance of the application as the earliest possible date.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Ronald O. Neerings".

Ronald O. Neerings  
Reg. No. 34,227  
Attorney for Applicants

TEXAS INSTRUMENTS INCORPORATED  
P.O. BOX 655474, M/S 3999  
Dallas, Texas 75265  
Phone: 972/917-5299  
Fax: 972/917-4418